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## REPLY BRIEF TRANSMITTAL LETTER

January 2, 2008

MAIL STOP APPEAL BRIEF - PATENTS  
COMMISSIONER FOR PATENTS  
P.O. Box 1450  
ALEXANDRIA, VA 22313-1450

Re: Applicant: Daniel SauFu Mui  
Assignee: ZiLOG, Inc.  
Title: "Relaying Key Code Signals Through a Remote Control Device"  
Serial No.: 10/737,029  
Examiner: Vernal U. Brown  
Atty. Docket No.: ZIL-568  
Filed: December 16, 2003  
Art Unit: 2612

Dear Sir:

Transmitted herewith are the following documents:

- (1) reply brief (14 pages);
- (2) a check for filing a brief in an appeal (\$510);
- (6) return postcard; and
- (7) this transmittal sheet.

- ☐ No additional Fee is required.  
☒ The fee has been calculated as shown below:

CLAIMS AS AMENDED						
	REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR	EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	26	minus	26	0	\$50	\$0.00
INDEP. CLAIMS	7	minus	7	0	\$200	\$0.00
Total Additional Claim Fee						\$0.00
Fee for filing a brief in an appeal [§41.20(b)(2)]						\$510.00
Fee for Request for Oral Hearing [§41.20(b)(3)]						\$0.00
Fee for Extension of Time ( __ month) [§1.17(a)(1)]						\$0.00
TOTAL						\$510.00
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By Darien K. Wallace  
Darien K. Wallace

Date of Deposit: January 2, 2008

Respectfully submitted,

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appellant: Daniel SauFu Mui

Assignee: ZiLOG, Inc.

Title: "Relaying Key Code Signals Through a Remote Control Device"

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**REPLY BRIEF**

Appellant requests that the appeal be maintained by filing this Reply Brief  
is in response to the Examiner's Answer filed November 1, 2007.

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### **I. STATUS OF CLAIMS**

The application at issue, filed on December 16, 2003, included 24 claims. In an amendment dated July 28, 2006, claims 25-26 were added. Claims 1-26 are subject to this Appeal.

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## **II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The following are grounds of rejection to be reviewed on appeal:

1) Claims 13-16, 19, 22 and 24-26 stand rejected under 35 USC §102(e) as being anticipated by Wouters et al. (US Patent 6,915,109).

2) Claims 1, 3-4 and 9 stand rejected under 35 USC §103(a) as being unpatentable over Pope (US Patent 5,963,624) in view of McNair et al. (US Patent 5,595,342).

3) Claim 2 stands rejected under 35 USC §103(a) as being unpatentable over Pope in view of McNair and further in view of Goldstein (US Patent 5,410,326).

4) Claim 5 and 10 stand rejected under 35 USC §103(a) as being unpatentable over Pope in view of McNair and further in view of Teskey (US Patent 6,747,568).

5) Claim 6 stands rejected under 35 USC §103(a) as being unpatentable over Pope in view of McNair and further in view of August et al. (US Patent 5,671,267).

6) Claim 7 stands rejected under 35 USC §103(a) as being unpatentable over Pope in view of McNair and further in view of Wouters.

7) Claim 8 stands rejected under 35 USC §103(a) as being unpatentable over Pope in view of McNair in view of Wouters and further in view of August.

8) Claim 18 stands rejected under 35 USC §103(a) as being unpatentable over Wouters in view of Teskey.

9) Claim 20-21 stand rejected under 35 USC §103(a) as being unpatentable over Wouters in view of August.

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10) Claim 23 stands rejected under 35 USC §103(a) as being unpatentable over Wouters in view of Pope.

### **III. ARGUMENT**

#### **A. Introduction**

The claims on appeal stand rejected because the Examiner has failed to read claim terms in light of the specification, and because many of the rejections are based on conclusory statements about the references, and not based on material actually found in the references. For these reasons, as further explained below and in the briefs already on file, the rejections of the claims should be reversed. The Examiner's Answer does not include any rejection designated as a new ground of rejection.

#### **B. The Claims**

The Claims on appeal include a few important terms. The terms should be interpreted in light of the specification, rather than the Patent Office's proposed interpretation, which is inconsistent with how the terms are used in the Specification.

As explained in the summary section of the Appeal Brief, the Specification describes a system 10 as including a remote control device 11, a key code generator device 12, and at least one electronic consumer device 13. As clearly identified and illustrated in Figure 2 of the Specification, the key code generator device holds a codeset usable to communicate with an electronic consumer device. A user presses a key on the remote control, and a corresponding keystroke indicator signal is sent to the key code generator device. The key code generator device uses information in the codeset to generate a key code corresponding to the pressed key. The key code generator device modulates the key code onto a first carrier signal, thereby generating a first key code signal. The key code signal is transmitted from the key code generator device back to the remote control device. The remote control device receives the key code signal, and then relays the key code by transmitting the key code in a second key code signal. The second key code signal is received by the electronic consumer

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device.

The Specification uses all of the key claim terms. It clearly indicates that a system is a collection of different devices, and that a remote control device is something with a keypad that is used to operate the consumer electronic devices. The Specification also indicates what a keystroke is and what a keystroke indicator signal is. The Specification indicates what a codeset is, what a key code generator is and what a key code is. It also indicates quite clearly what a key code signal is. All of these terms are clearly defined by the Specification, and these terms should be interpreted in light of the Specification in connection with any comparison of prior art to the Claims.

### **C. The Prior Art**

Two pieces of prior art are principally at issue in this appeal. The first is Wouters (U.S. Patent No. 6915109), and the other is Pope (U.S. Patent No. 5963624). Wouters is directed to taking information from an infrared remote control device and converting the infrared signal from the infrared remote control device into a radio frequency signal so that the information can be transferred to a second room, where it is then received by a consumer device.

As clearly explained in the Appeal Brief, Wouters discloses that all codeset and key code information is held within the Wouters remote control device.

In Pope, a digital cordless phone 10 communicates with a base unit 12. Pope clearly states, as already explained in the Appeal Brief, that the digital cordless phone 10 holds all of the codeset and key codes used by any consumer electronic devices. The base unit 12 only takes the information from the digital cordless phone 10 and translates it into an infrared signal. Both references thus are directed to devices completely different than the methods and devices at issue in this Appeal.

**D. Rejection of claims 13 and 22**

Independent claims 13 and 22 are directed to a remote control device. A remote control device is not a “system” as that term is used in the Specification. As used in the Specification and as is generally understood, a “system” is a collection of different devices. A remote control device is a single item, and is clearly understood to be such when one refers to the Specification. Furthermore, each of claims 13 and 22 begins with the statement that the subject matter of the claim is: “A remote control device.” This is not preamble language that explains how the remote control device will be used or in what environment the remote control device will be used, as the Examiner suggests. (Examiner’s Answer, p. 12, lines 8-9) Consequently, the claim language “A remote control device” cannot be ignored as being superfluous preamble language.

Claims 13 and 22 define the remote control device as including a receiver, a transmitter and a keypad. The Examiner has rejected the claims based on descriptions of various components from a reference. The rejection does not rely on a device disclosed in the reference, but instead relies on what the Examiner calls a “system of devices” that includes such components. (See, e.g., Examiner’s Answer, p. 3, line 23). A system is not the same as a remote control device, as explained above. Claims 13 and 22 do not read on various components distributed throughout various rooms of a house, as disclosed by Wouters. Claims 13 and 22 could not successfully be asserted against such a “system”. This further demonstrates that it is improper to ignore that the claim is directed to a device and not a system, so the rejection should be reversed.

The Examiner comments that the terms “system” and “device” are not mutually exclusive because a device generally comprises a plurality of other devices. (Examiner’s Answer, p. 12, lines 12-15). The Examiner’s comment does not support the Examiner’s argument that the claim limitation “remote control device” can be interpreted to comprise a plurality of other devices distributed throughout various rooms of a house. It is clear from the wording of claims and from the Specification that the recited “remote control device” cannot



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be interpreted as multiple devices that are physically located in multiple rooms.  
A remote control device is a single remote control.

**E. Rejection of claim 14**

Claim 14, which depends from claim 13, states that a key code corresponds to a function of electronic consumer device and that the key code also corresponds to a second function of a second electronic consumer device. As explained in the Appeal Brief, Wouters does not disclose this claim limitation. Moreover, the Examiner did not stated that Wouters discloses one key code that corresponds both to a function of an electronic consumer device as well as to a second function of a second electronic consumer device.

In the Examiner's Answer, the Examiner now suggests that Wouters discloses that "the same key code is used for separate functions of turning on different electronic consumer devices" when the remote control is used to activate two devices of the same kind, such as two VCRs of the same brand. (Examiner's Answer, p. 12, line 20 – p. 13, line 2). So the Examiner now argues that when the same key code is used to turn on two electronic consumer devices of the same kind, "turning on" the first device constitutes one function, whereas "turning on" the second of the identical devices constitutes a second function. Interpreting the "turning on" function of two identical devices to be two separate functions is a semantic slight of hand that is inconsistent with the tenets of claim interpretation and the use of the claim term "a second function" in the claims and the Specification. Under the tenets of claim differentiation, the terms "said function" and "a second function" used in the same claim cannot be interpreted to be the same "turning on" function. For these reasons, the rejection of claim 14 should be withdrawn.

**F. Rejection of claim 16**

In the Appeal Brief, Appellant pointed out that the Examiner has not presented a *prima facie* argument of anticipation of claim 16 because the

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Examiner does not state that Wouters discloses a first binary number of a key code corresponding to a first function, as well as a second binary number of the same key code corresponding to a second function. The Examiner's response in the Answer Brief does not address where Wouters discloses a second binary number of the same key code that corresponds to a second function. Instead, the Examiner states, "The data from the memory is inherently store as binary data and the data representative of each key tapped includes a first and second binary number" (Examiner's Answer, p. 13, lines 6-8). The fact that data representative of a tapped key includes both a first binary number and a second binary number does not address whether the first binary number corresponds to a first function, and the second binary number corresponds to a second function. No *prima facie* argument of anticipation of claim 16 has been presented.

#### **G. Rejection of claim 24**

Dependent claim 24 recites that the remote control device includes a means for receiving a key code from an RF receiver and that the means is a microcontroller. Appellant has argued that Wouters does not disclose a microcontroller for receiving a key code from an RF receiver. The Examiner now responds that "Wouters teaches a radio receiver (13) that is a microcontroller" (Examiner's Answer, p. 13, lines 10-11). Appellant respectfully disagrees. Wouters does not disclose that "radio receiver 13" is a microcontroller. In fact, Wouters does not mention a microcontroller, a microprocessor, or a processor of any kind.

#### **H. Rejection of claim 19**

Claim 19 recites, "a codeset is stored on said key code generator device, said codeset including said first key code and said second key code, wherein said first key code corresponds to a selected function of a first electronic consumer device, and wherein said second key code corresponds to said selected function of a second electronic consumer device" (emphasis added).

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Appellants have argued that the Examiner has not presented a *prima facie* argument of anticipation of claim 19 because the Examiner has not stated that Wouters discloses a codeset including the two key codes recited in claim 19 that correspond to the same function on different electronic consumer devices. Nor has the Examiner stated that Wouters discloses that those two key codes are included in a codeset stored on the key code generator device.

In fact, Wouters does not mention key codes that correspond to the same function on separate electronic consumer devices. The Examiner now argues that the two recited key codes are inherently present if the system of Wouters can turn on two different brands of television. The Examiner argues that the remote control unit 3 of Wouters discloses the recited key code generator. The Examiner states, "Wouters teaches a key code generator (3) for generating key codes for controlling different function on various electrical appliances (col. 1 lines 24-26, col. 3 lines 21-35). The key codes for controlling the different devices inherently includes a first and second key code e.g. the turning on of two different brand of TV requires two different signals." (Examiner's Answer, p. 13, lines 15-18).

Even if this were true, the Examiner has not stated that Wouters discloses that the two recited key codes are included in a codeset stored on remote control unit 3 of Wouters. The Examiner's statement still does not establish a *prima facie* argument of anticipation of claim 19 because the Examiner has not alleged that a codeset is stored on remote control unit 3 of Wouters that includes the two recited key codes. For this reason, as well as the other reasons identified in the Appeal Brief, the reversal of the rejection of claim 19 is requested.

#### **I. Rejection of claim 25**

Appellant has maintained that the Examiner has improperly argued that the "remote control device" recited in claim 25 is disclosed by remote control unit 3 of Wouters for purposes of one limitation in claim 25 and by item 12 in room 2 of Wouters for purposes of another limitation in claim 25. The Examiner

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responds that caselaw from 1961 prevents any weight to be given to structure in a method claim that does not “affect the method in a manipulative sense”. (Examiner’s Answer, p. 13, line 20 – p. 14, line 2). Thus, the Examiner maintains that it is proper to ignore the structure of the “remote control device” recited in claim 25. Appellant respectfully disagrees with the Examiner’s interpretation of the law. It is improper to ignore the structure of the claim limitation “remote control device” and thereby find that the recited “remote control device” is disclosed by separate structures for purposes of separate claim limitations within a single claim. The method of claim 25 describes how structures interact. The structures cannot be ignored for purposes of claim interpretation.

Moreover, Wouters does not disclose that item 12 in room 2 is a remote control device. The Examiner states that his position is that “the reference 12 represents the receiving subsystem of the remote control as claimed in claim 5 of Wouters” (Examiner’s Answer, p. 14, lines 3-5). In order to be valid, however, the Examiner’s position must be supported by the prior art disclosure. Nowhere does Wouters disclose that item 12 is a remote control device. In fact, item 12 has not keypad or user input mechanism.

#### **J. Rejection of claim 26**

As explained in the Appeal Brief, the rejection of claim 26 should also be reversed. The Examiner’s Answer does not address this argument, so the reversal of this rejection is requested.

#### **K. Rejection of claim 1**

Claim 1 recites, “receiving a keystroke indicator signal from a remote control device”. The Examiner argues that Pope teaches “receiving a keystroke indicator signal which is the RF signal transmitted from the remote control containing an indication of a key on the remote control device 10 that was pressed (col. 2 lines 61-col. 3 line 19)” (Examiner’s Answer, p. 14, lines 8-11). Appellant respectfully disagrees. Pope does not teach that remote control device

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10 sends a keystroke indicator signal to base unit 12. In fact, the passage of Pope cited by the Examiner states that “appliance control codes” are transmitted as opposed to keystroke indicators. Pope does not teach that remote control device 10 transmits an indication of a selected key to base unit 12. The keystroke indicator has already been used to generate the appliance control code within remote control device 10 of Pope.

Appellant has argued that it is improper to construe a signal of Pope containing an “appliance control code” as teaching both a keystroke indicator signal as well as a key code signal. The Examiner responds that “the key code signal is considered as the RF signal and the key code is the IR signal” (Examiner’s Answer, p. 14, lines 18-19). The Examiner’s statement appears to admit that the “RF signal” of Pope (Pope does not mention RF or radio frequency) from remote control device 10 to base unit 12 is not a keystroke indicator signal but rather a key code signal containing an appliance control code.

In addition, the Examiner’s rejection is also based on the recited key code being the IR signal of Pope. (Examiner’s Answer, p. 14, line 13-14, 18). As explained in the Specification, a key code is not the same as a key code signal (which is often transmitted in an IR signal). Thus, the recited “code” cannot be taught by a “signal”.

Finally, Appellant has argued that McNair does not teach modulating a key code onto a carrier signal. McNair does not teach a key code at all. The Examiner has previously admitted that Pope is silent on teaching modulating a key code onto a carrier signal. (10/19/06 Office Action, p. 6, line 7) Now the Examiner states that “McNair is relied upon for teaching the modulating of a wireless transmission from a remote controller” (Examiner’s Answer, p. 15, lines 2-3). Thus, the Examiner has admitted that neither Pope nor McNair teaches modulating a key code onto a carrier signal. For this reason as well, the Examiner has failed to establish a prima facie case of obviousness of claim 1 over the combination of Pope and McNair.

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The rejection of claim 1 should therefore be reversed.

**L. Rejection of claim 9**

Claim 9, which depends from claim 1, further states that the remote control device does not store a codeset. The Examiner's Answer states that it is the Examiner's position that a codeset is used for generating an infrared signal in the base unit 12, and therefore a codeset is clearly not stored in the handheld unit 10. (Examiner's Answer, p. 15, lines 9-13). This statement is contrary to the clear language of Pope, as quoted in the Appeal Brief. Pope actually states that the codeset is stored in the handheld unit. Reversal of the rejection of claim 9 is respectfully requested.

**M. Rejection of claim 2**

Claim 2 recites "said key code signal is transmitted in (d) from said key code generator device to said remote control device". Appellant has argued that Goldstein does not teach transmitting a key code signal from the key code generator device back to the remote control device. The fact that Goldstein may teach sending an IR code from a cable television converter box to a remote control device does not teach transmitting a key code signal from a key code generator device back to the remote control device.

The Examiner states that he considers "the responding to the request for key code by the cable box as the generation of key code and satisfy the claim limitation of a key code generator because the generation of key code is broadly claimed with no specific given to the means of generating the key codes" (Examiner's Answer, p. 15, lines 18-21). The Examiner's rebuttal does not refute that codes, as opposed to key code signals, are sent from the cable television converter box of Goldstein to the remote control device. Thus, Goldstein does not teach the recited transmitting a key code signal.

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**N. Rejection of claims 5 and 10**


As with regard to claim 1, for the rejection of claims 5 and 10, the Examiner relies on an "RF signal" of Pope for containing an indication of a key on the remote control device 10 that was pressed. (Examiner's Answer, p. 16, lines 8-11). Pope does not teach, however, that remote control device 10 sends a keystroke indicator signal to base unit 12. The passage of Pope cited by the Examiner states instead that "appliance control codes" are transmitted. Pope does not teach that remote control device 10 transmits an indication of a selected key to base unit 12. The keystroke indicator has already been used to generate the appliance control code within remote control device 10 of Pope.

**O. Rejection of claims 6-8, 18, 20-21 and 23**

As to the remaining dependent claims 6-8, 18-21 and 23, the limitations included therein have already been discussed in the Appeal Brief and earlier in this Reply, so the reversal of the rejections is again respectfully requested.

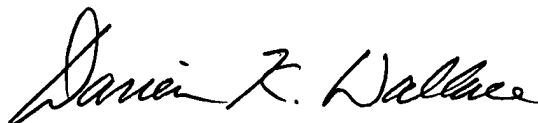
Appellant requests that the Board reverse the §102 and §103 rejections of claims 1-26.

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